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**Supply**

**RECOVERABLE AND UNUSABLE LIQUID  
PETROLEUM PRODUCTS**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction sets goals, assigns responsibilities, and provides guidance for recovering usable and disposing of unusable liquid petroleum products. It requires HQ USAF offices, Air National Guard, Air Force Reserve, major commands (MAJCOM), and other subordinate activities to establish and implement operating and accounting procedures in connection with recovering and disposing of such products. At Air Force government-owned, contractor-operated (GOCO) industrial plants, plant personnel manage recovery and disposal of liquid petroleum products according to prevailing Federal, state, and local requirements. **Attachment 1** is a list of abbreviations, acronyms, and terms.

**SUMMARY OF REVISIONS**

This is the first publication of AFI 23-502, substantially revising the guidance previously outlined in AFR 19-14.

**Section A—Air Force Goals**

**1. Overall Goal.** The Air Force supports the overall Department of Defense (DoD) goal of petroleum-product recovery and disposal by:

- 1.1. Supporting the DoD objective to efficiently operate fuel conservation and recovery programs to reduce waste, prevent pollution, and conserve natural resources.
- 1.2. Complying with all applicable Federal, state, local, and host nation laws on environmental protection as described in AFR 32-70, *Environmental Quality*.
- 1.3. Implementing Air Force environmental instructions related to petroleum, oils, and lubricants (POL) reuse: AFI 32-7005, *Environmental Protection Committees*; AFI 32-7042, *Solid and Hazardous Waste Compliance*; AFI 32-7044 *Storage Tank Compliance*; AFI 32-7006, *Overseas Environmental Compliance and Restoration*; and AFI 32-7080, *Pollution Prevention Programs*.

1.4. Efficiently collecting, using, and reusing government-owned petroleum products to the fullest extent permitted by sound considerations of economy, property management, fuel quality control, and environmental protection.

### ***Section B—Air Force Responsibilities***

**2. HQ USAF.** Air Staff offices oversee recoverable and unusable liquid- petroleum- product programs according to this instruction.

2.1. HQ USAF Civil Engineer (HQ USAF/CE), develops guidance to implement regulatory compliance relating to hazardous waste management within the Air Force.

2.2. HQ USAF/LG, Directorate of Supply (LGS), develops Air Force policy to effectively manage recoverable and unusable petroleum products.

**3. Major Commands (MAJCOM) and Field Operating Agencies (FOA) (LGS and CE).** These agencies:

3.1. Ensure recoverable and unusable fuel management is incorporated into the Resource, Recovery, and Recycling (RRR) Program.

3.2. Make sure appropriate staff agencies review recoverable and unusable petroleum products programs during visits and evaluations of installations.

3.3. Prohibit environmentally unacceptable disposal practices, such as using recoverable and/or unusable products for weed, insect, or road dust control; open pit burning; dumping into landfills, sewers, water, or storm drains, and so on.

3.4. Coordinate all changes to stated Air Force hazardous waste management policy contained in this instruction through HQ USAF/CE.

**4. San Antonio Air Logistics Center Directorate of Aerospace Fuels (SA-ALC/SF).** This directorate is the Air Force Recoverable and Unusable Petroleum Products program monitor. It:

4.1. Develops appropriate procedures and guidelines to effectively manage recoverable and unusable petroleum products.

4.2. Solves problems involving petroleum product contamination, collection, and recycling problems that MAJCOM or base personnel cannot solve.

4.3. Provides laboratory support for product testing beyond base-level capabilities.

4.4. Provides guidance through technical order (TO) 42B-1-23, *Management of Recoverable and Waste Liquid Petroleum Products*, for handling and disposing of products covered in this instruction.

4.5. Evaluates effectiveness of command and agency programs through field visits and inspection reports.

**5. Air Force Civil Engineering Support Agency (AFCESA/ENM).** AFCESA/ENM provides technical assistance on collecting, storing, and disposing of recoverable and unusable petroleum products.

**6. Base or Installation.** At the base or installation level, a number of individuals and agencies carry out activities related to petroleum-product recovery and disposal.

**6.1. The Commander:**

- 6.1.1. Oversees the development of a comprehensive program to manage the segregation and collection, reuse, or recycling of recoverable product and the disposition of unusable petroleum products.
- 6.1.2. Designates operational agencies that are major users and handlers of petroleum products to implement the program, such as Aircraft Maintenance; Civil Engineering; Supply; Transportation; Fuels Management; Morale, Recreation and Welfare, and Army Air Force Exchange Service.
- 6.1.3. Reviews and approves the program and sends it to the MAJCOM LGSF/CEV.
- 6.1.4. Develops guidelines on using, inspecting, and maintaining oil and water separators.
- 6.1.5. Submits the program for functional review to the following agencies: Safety Office, Environmental Health, Defense Reutilization and Marketing Office (DRMO), and Accounting and Finance.

**NOTE:**

In most instances, no single organization on an installation has all the resources needed to implement the program. Therefore, the installation commander must delegate to primary supporting agencies to get technical help and resources.

**6.2. The Base Civil Engineer:**

- 6.2.1. Provides technical guidance and assists organizations that generate unusable petroleum products on how to dispose of them.
- 6.2.2. Manages recyclable petroleum products for the installation within the overall RRR Program.
- 6.2.3. Develops procedures at base level for disposal of waste petroleum products.
- 6.2.4. Oversees changes for permanently installed petroleum recovery facilities to meet individual installation requirements. The US Army Corps of Engineers, Huntsville Division, ATTN: CEHND-ED-ES-1, Huntsville AL 35807-4301, DSN 645-4782, provides standard design criteria drawings.
- 6.2.5. Acts as overall manager for the base program and develops the environmental portion of the program. Under this part of the program the civil engineer:
  - Advises base agencies on how to collect, store, and dispose of petroleum products according to environmentally acceptable procedures and EPA and state regulations.
  - Evaluates the environmental program on compliance with established standards of pollution control.

**6.3. The Base Fuels Management Office:**

- 6.3.1. Helps base organizations in determining how to dispose of used petroleum products.
- 6.3.2. Accepts and accounts for suitable product that is returned to fuels bulk storage facilities.

- 6.3.3. Develops procedures for returning unused products to inventory as part of the base program.
- 6.3.4. Operates permanently installed bulk storage facilities.
- 6.3.5. If applicable, manages the base centralized petroleum reclamation and reuse facility.

#### **6.4. The Generating Activity:**

- 6.4.1. Supervises proper collection, segregation, handling and disposal of unused, recoverable, and unusable products or hazardous waste fuels according to TO 42B-1-23, the base program, and Environmental Protection Agency (EPA) and state regulations. *Note: Once the generating activity decides to discard the fuel, rather than reuse, recover, or recycle, they manage the fuel as hazardous waste.*
- 6.4.2. Obtain enough suitable containers to properly segregate and store recoverable and unusable products and hazardous waste fuel by product type. Procure or locally construct fuel bowsers for aircraft ground support to meet the standard specifications in TO 42B-1-23, Appendix A. Paint or mark containers and bowsers according to TOs 42B-1-23, 35-1-3, *Corrosion Prevention, Painting, and Marking for US Air Force Support Equipment*, and 36-1-3, *Painting, Marking, and Lighting Requirements for US Air Force Vehicles*, as appropriate.
- 6.4.3. Provides or arranges transportation of products to collection or disposal points according to the base program.
- 6.4.4. Manages recoverable and unusable petroleum program at the operating level.
- 6.4.5. Submits data on quantity and identity of recoverable and unusable petroleum products, as required, to the designated installation environmental component of the program.

### ***Section C—Base Program for Recoverable and Unusable Petroleum Products***

**7. Program Documentation.** Documentation may be in the form of a plan or a base operating instruction.. The following TOs provide operational guidance. Reference the TOs in the program documentation:

- TO 35-1-3, *Corrosion Prevention, Painting, and Marking for US Air Force Support Equipment*.
- TO 36-1-3, *Painting, Marking, and Lighting Requirements for US Air Force Vehicles*.
- TO 42B-1-1, *Quality Control of Fuels and Lubricants*.
- TO 42B-1-23, *Management of Recoverable and Waste Liquid Petroleum Products*.
- DoD 4140.25-M, *Management of Bulk Petroleum Products, Storage, and Distribution Facilities*, July 1988.

**8. Program Content.** The program must state specific responsibilities and criteria for collecting, storing, returning to inventory, reusing, recycling, and disposing of all unusable petroleum products and hazardous waste fuels generated on the base. The program must be environmentally acceptable and consistent with effective energy conservation, property management, and quality control principles, as well as sound economics. The program must include at least the following:

- 8.1. Identification of all generating agencies by organization.

8.2. A list of all recoverable and unusable products and hazardous waste fuels generated by an organization, including source, approximate quantity, and condition.

8.3. The specific responsibilities of base organizations.

8.4. Methods and facilities available to the base to collect, store, return to inventory, reuse, recycle, and dispose of products.

8.5. Accounting procedures for recoverable and unusable petroleum and procedures to credit organizations using the guidelines in AFMAN 23-110, *USAF Supply Manual* (formerly AFM 67-1), and **Section D** of this instruction.

8.6. Specific base and organizational procedures for the entry, exit, and control of unusable petroleum product vehicles. If escort control is necessary, develop procedures according to AFI 23-204, *Fuel Tanks* (formerly AFRs 144-11 and 144-16). The procedures must specify positive product control by designating pick up locations, verifying pick up quantities, and whenever possible, using a single entry and exit.

8.7. The program must stress sound conservation and property management of unusable products, and where feasible the on-base recycling through reuse of used products. The priorities for disposition of products are:

8.7.1. Return on-specification fuel to the base inventory for use as the original grade.

8.7.2. Return off-specification fuel to the base inventory and blend into the original or different grade making a regraded product.

8.7.3. Recycle products on-base by reusing in secondary applications such as a heating fuel.

8.7.4. Categorize any remaining products as surplus. Send them as recyclable products to the DRMO. Credit DRMO sales to the base RRR account.

8.7.5. For nonrecyclable waste, contract with a service company to remove the waste from the base. Manage this product as hazardous waste according to the Resource Conservation and Recovery Act (RCRA).

### ***Section D—Financial Management***

**9. General Guidelines.** Recoverable petroleum products represent a significant economic resource. To retain or recoup product value, make every effort to collect, segregate, and return on-specification petroleum products to inventory and to reuse or recycle recoverable petroleum products. If on-base reuse or recycling is not possible, dispose of recyclable or unusable petroleum products through DRMO sale. Each installation must properly credit proceeds from the sale of recyclable products to the RRR program. But the installation must first use the proceeds generated and credited to the RRR program to offset the collection cost of products sold.

**10. How To Account for Fuel.** Accounting conducts a number of tasks related to managing fuels returned to storage, used petroleum products, surplus products, recycled products, and unusable products.

**10.1. Fuels Returned to Storage as Original Grade.** Credit (1DF) aircraft aviation fuel, non-fly aviation fuel, and ground fuel returned as the original grade to bulk fuels storage at standard price to the aircraft or organization from which the fuel was collected. When multiple agencies contribute to

a central collection point, credit (1DF) the fuel on a percentage basis to each flying organization. Follow DoD 4140.25-M and MIL-HDBK 200G, *Military Standardization Handbook, Quality Surveillance for Fuels, Lubricants, and Related Products*, procedures for reporting any procedures concerning Defense Logistics Agency-owned fuel.

**10.2. Fuels Returned to Storage in a Different Grade.** Account for aircraft aviation fuel, non-fly aviation fuel, and ground fuel returned to bulk fuels storage in a grade different from its original grade by:

- 10.2.1. Crediting (1DF) the aircraft or organization at the standard price of the original product.
- 10.2.2. Processing an identity change.
- 10.2.3. Processing a shipment (1SP).
- 10.2.4. Requesting Defense Fuel Supply Center (DFSC) approval through MAJCOM/LGSF, according to DoD 4140.25-M.

**10.3. Used Oils and Other Petroleum Products.** Used and recovered petroleum products, other than aviation and ground fuels, also represent a source of economic value. If environmentally acceptable, consider them for reuse on the installation (Example: used lubricating oil blended for use in heating plants) rather than for sale through DRMO. When the installation can use material in this category, use it with the full coordination with the base environmental function. Properly reusing petroleum products on base is sound property management; however, accounting cannot transfer funds or credit the agency which generated the used products. Bases should make maximum use of petroleum products as a priority.

**10.4. Surplus Products.** Products that cannot be returned to base inventory, used in a secondary application on-base, or transferred to other DoD activities for reuse are eligible for recycling through sale by the DRMO. Incorporate the management of the proceeds from recyclable petroleum products sales into the RRR program accounting process. Dispose of the sale proceeds according to AFR 177-102, *Commercial Transactions at Base Level*.

**10.5. Reprocessed Products.** Recycling through reprocessing may be a viable alternative for off-specification or contaminated fuel that is not suitable for downgrading. For very large quantities of such fuel (usually base fuels bulk storage product contaminated through fire, spill, and so on.), the fuels management office, in coordination with the base contracting function and the respective MAJCOM, investigates the potential for recycling the product through reprocessing. This effort includes:

- 10.5.1. Researching the local commercial refining or reprocessing capability.
- 10.5.2. Checking the potential for recycling or reprocessing through the DFSC wholesale system.
- 10.5.3. Comparing costs associated with reprocessing to costs for a new product buy to costs associated with disposal as a waste. For Air Force stock fund fuel, and DFSC-owned fuel, bases send requests for funding of reprocessing costs to the respective MAJCOM. The MAJCOM reviews the economics of the alternatives and, as appropriate, sends requests to SA-ALC/SFRL for funding by the Air Force fuel stock fund account or to DFSC for DoD stock fund fuel. If the fuel is organization-owned, the installation bears the reprocessing costs.

**10.6. Unusable Petroleum Products.** Petroleum products not returned to base storage or reused on-base or at other DoD installations in the vicinity are considered unusable. Properly identify these

products on appropriate item records and sell through the DRMO. Send requests for recycling DFSC-owned fuel DFSC for consideration with an information copy to the MAJCOM.

**11. Documentation Disposal.** Dispose of documentation according to AFI 37-139, *Records Disposition--Standards*.

JOHN M. NOWAK, Lt General, USAF  
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## Attachment 1

### GLOSSARY OF ACRONYMS, ABBREVIATIONS, AND TERMS

#### *Abbreviations and Acronyms*

**AFCESA**—Air Force Civil Engineering Support Agency

**CFR**—Code of Federal Regulations

**CE**—Civil Engineering

**DFSC**—Defense Fuel Supply Center

**DoD**—Department of Defense

**DRMO**—Defense Reutilization and Marketing Office

**EPA**—Environmental Protection Agency

**FOA**—Field Operating Agency

**GOCO**—Government-Owned, Contractor-Operated

**HQ USAF/LGSF**—Fuels Management

**MAJCOM**—Major Command

**POL**—Petroleum, Oils, and Lubricants

**RCRA**—Resource Conservation and Recovery Act

**RRR**—Resource, Recovery, and Recycling

**TO**—Technical Order

#### *Terms*

**Environmental Protection Committee.**—The group at each Air Force installation that serves as a central forum to guide and monitor the overall installation environmental protection program (AFPD 3270).

**Generating Activity.**—A base agency (host, tenant, or contractor) that generates recoverable or unusable petroleum products.

**Hazardous Waste Fuel.**—A waste petroleum product mixed with a hazardous waste or exhibits a characteristic of hazardous waste as defined by the 40 CFR Part 261, in which there is an intent to discard.

**Recoverable Products.**—Products that still have useful physical or chemical properties:

**Off-Specification Product.**—Product which has one or more offspecification characteristics (e.g., color, vapor pressure, flash point, etc.). Offspecification products can be blended as regraded products. Offspecification products are not identified as hazardous waste fuel.

**On-Specification Product.**—Product of suitable quality for return to the base inventory. TO 42B123, table 31, *Management of Recoverable and Waste Liquid Petroleum Products*, sets the criteria for a suitable quality. Do not consider as offspecification if the presence of solids and water that can be removed by rotation through onhand separators.

**Recyclable Products.**—Products determined to be surplus to Air Force needs that are burned for energy recovery; e.g., JP4 contaminated with hydraulic fuel (fail color specification) and used lubricating oil are recyclable products when burned for energy recovery as a fuel. Many products are recycled by sale through the Defense Reutilization and Marketing Office.

**Reprocessing.**—Refining, clay filtering, or naphtha injection to bring offspecification product up to specification.

**Unusable Petroleum Product.**—Product that is no longer suitable for any use on an installation due to excessive contamination or quality degradation.

**Products Involved.**—The products covered by this instruction are lubrication oils, aviation fuel, distillates, and gasoline.